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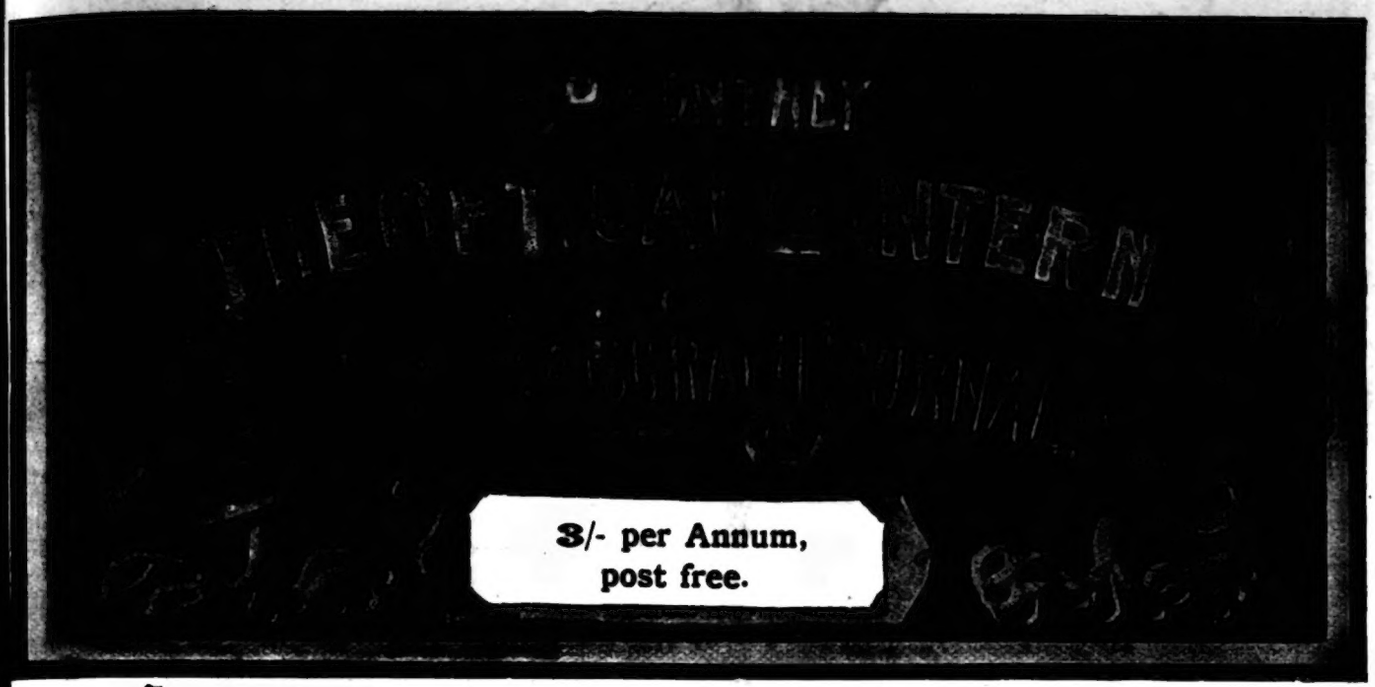

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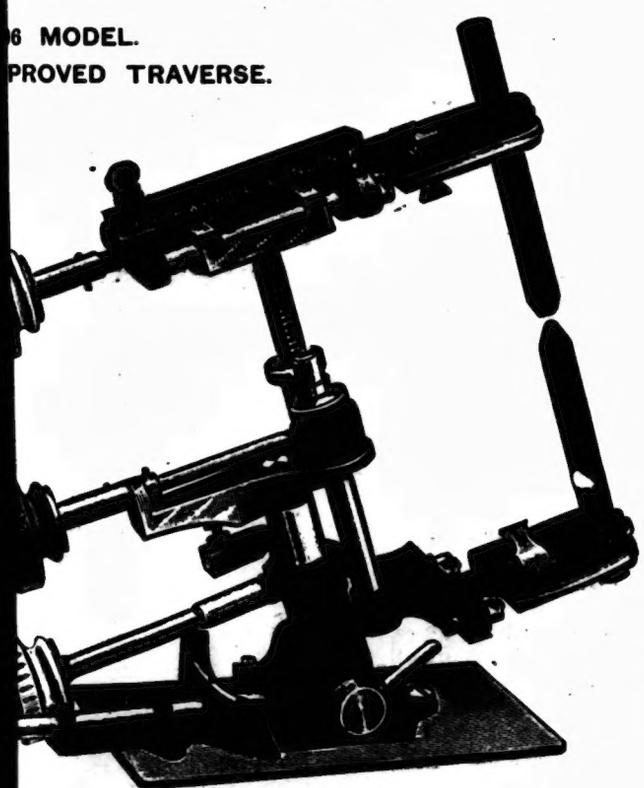

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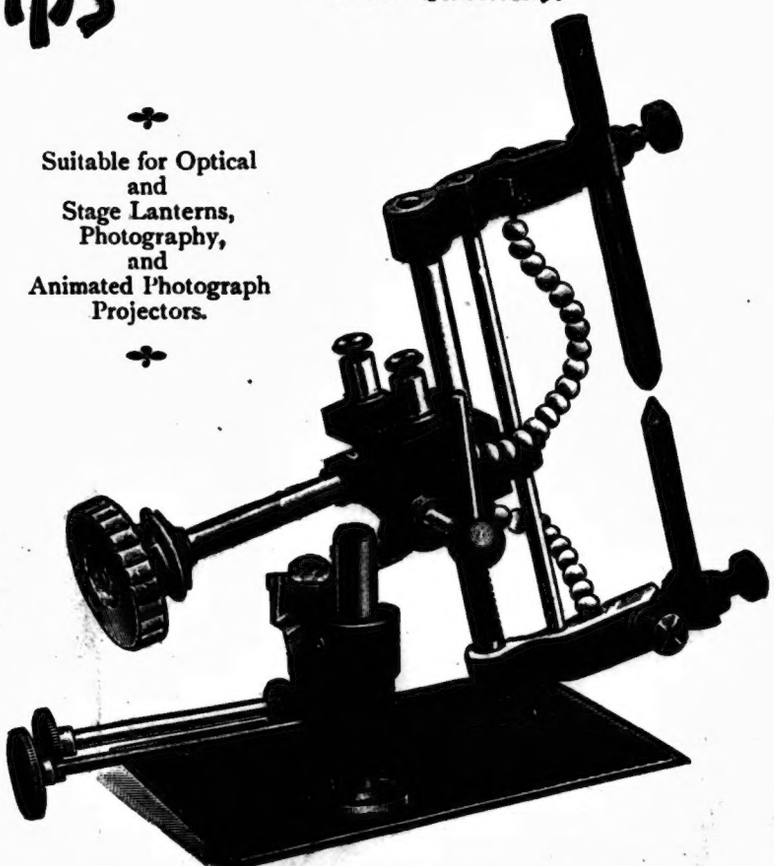

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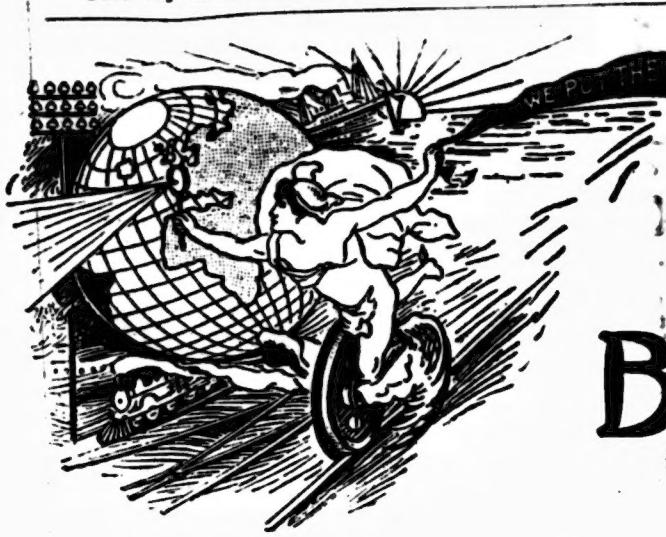

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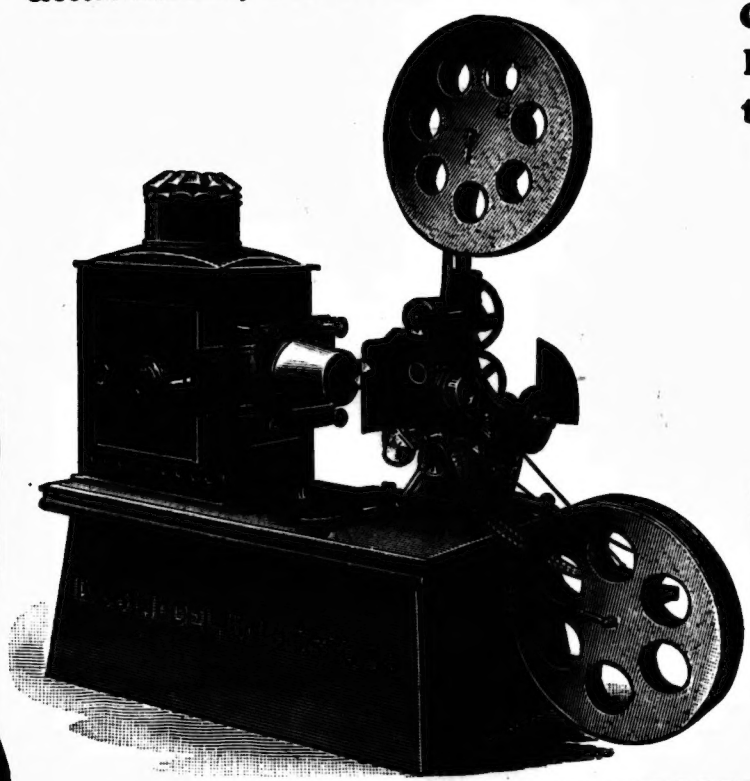

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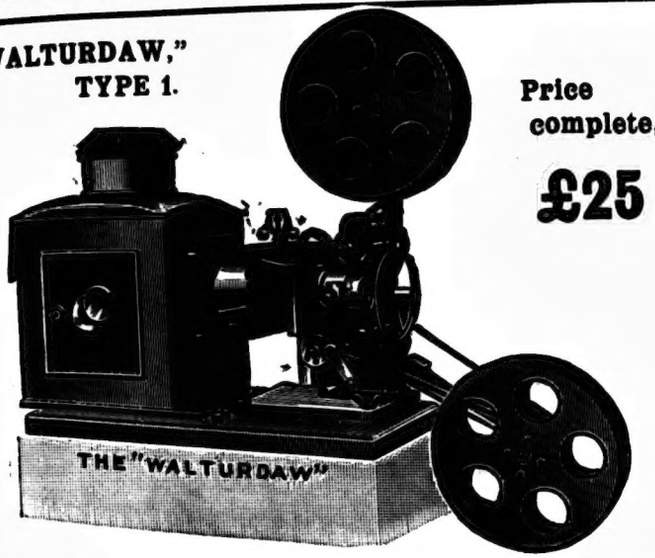

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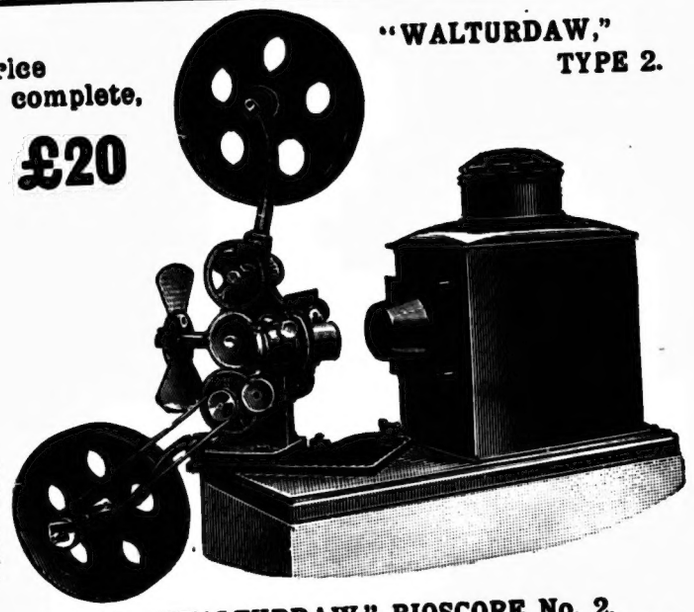

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THE question asked by Mr. C. D. Schwann in the House of Commons on Wednesday, March 21st, with reference to the Waterloo Cup Coursing pictures exhibited at the Palace Theatre, which depicted the death of a hare, and to which a reply was given stating that the picture had been withdrawn, is of the greatest importance not only to film manufacturers but to the general public. The Palace authorities did not, however, withdraw the film, as stated by the hon. member, but cut out a very slight portion, which was considered too realistic.

Mr. Fitzroy Gardner, writing from the Palace Theatre, says:

> As it might appear from the Home Secretary's answer to Mr. Duncan Schwann's question in the House of Commons that the coursing bioscope picture referred to was withdrawn in consequence of the question being asked, will you kindly allow me to state that the picture has not been withdrawn, but that three minutes after I had seen it on the first night it was shown I gave instructions for that portion of the film showing the actual death of the hare to be cut out. There did not seem to be any reason for withdrawing the picture in its entirety, or I should have done so.

IF there had been no Cinematograph to record this alleged revolting incident there would have been no question raised in the House. Now, why in the name of commonsense, was an objection taken to a mere representation of an actual fact? It was not the killing of the poor "puss" which was objected to. Oh, no! Had this happened in a decent respectable manner nothing would have been heard of it, but because the faithful camera recorded the piecemeal manner in which the death of the hare was accomplished, the tender hearts of our legis-

lators, apparently good music hall habitués, were hurt to the core. Not, mark you, because this happened in the Waterloo Cup Coursing meeting, but because it was too faithfully re-acted at a music hall.

✤

SO-CALLED "sport" has ever in its train sickening details accompanying the death dealt out to innocent dumb creatures. The Cinematograph proprietors, instead of being worried by requests to take such films out of their programme should be commended for being able to show up the cruelties practised under the name of "sport," and thus awaken the public to a knowledge of what goes on in this "enlightened" country. Why was cock-fighting stopped? Why has bull-fighting become a thing of the past? Because these "sports" were a degradation to the country, owing to their brutalising tendency. Is it not equally lowering to see a frightened hare dismembered by dogs? The former were damned by the Press, and cried down on the public platform. Why, therefore, should not living pictures be utilised to accomplish a similar object?

✤

WHEN one reviews the manner in which so many other kinds of beast and bird are put to death for the same excuse, viz., "sport," the absurd question raised in the House, with its absurder result, seems truly a farce. If Parliament would strike at the root of the matter, and endeavour to abolish or modify some of our modern forms of sport, their time would be better employed, and, meanwhile, the Cinematograph exhibitions, which educate the public mind in every way, will be usefully employed in recording and showing similar incidents, which are a disgrace to the country. The optical lantern fills many useful parts in the life of the people, and in our opinion one of the most useful is its truthful representation of actual life in its varying phases. Its efforts should be cultivated by our legislators, who should dispel some of the useless restrictions which they have wantonly imposed.

✤

THE *Daily News* is this connection says:

"A very interesting question of æsthetics and morals is raised by the right and proper decision of the authorities at the Palace Theatre to eliminate from their programme a bioscopic representation of a hare's death agonies in the race for the Waterloo Cup. Here is a public event which is witnessed by enormous numbers of persons, which is described at length in many newspapers, which is considered to be perfectly respectable by society as a whole, but which, when photographed, is suddenly seen to be a gross offence against all the finest instincts of mankind. We agree with the action of the Palace authorities, but by what rule of reason or logic are we to condemn the bioscope while cheering and gloating over the fact? The race for the Waterloo Cup is no secret surgical operation; it is as much a festival as a Spanish bull fight or a Roman gladiatorial battle. Multitudes throng the course for the sole purpose of witnessing precisely what the audience at the Palace Theatre is to be debarred from witnessing. The very music halls will not tolerate the sights which apparently delight the denizens of the racecourse. We dare not face the record of our own national and—by hyphothesis—honourable sports and pastimes. At once the good sense of Parliament and the unspoken verdict of the pleasure-loving community passes a veto upon the proceedings. Why is it that the camera so quickly shows us where we stand in such matters? It is 'the fresh eye' brought to bear upon the established tradition, and it stereotypes the cruelty which we had regarded merely as a passing phase."

✤

Optical Lantern Journal (February, 1906, page 70):—

"The next form of luminant to be considered is acetylene; portability is its only claim; it is very little superior in point of illumination to a good 4 wick oil lamp . . ."

Page 37, The Optical Lantern, by A. Pringle.

"The latest aspirant for popular favour as a general illuminant is acetylene gas. . . . When consumed under proper condition, and with a suitable burner, it will give a light equal to 200 to 300 candles, which places it far ahead of the ordinary oil lamp for small exhibitions, and brings it somewhere near the blow-through lime-light jet."

WE thank our anonymous critic for his comparison of apparently contradictory statements as above, but "a fair field and no favour" has always been and ever will be our motto. We wished to discuss thoroughly each and every kind of illuminant, and therefore commissioned well-known men to write articles on the subjects on which they were authorities. Each spoke of his peculiar knowledge of the subject dealt with. We do not pledge ourselves to their views, but give them to enable correspondents to chose those illuminants best adapted for their own particular requirements. Our critic could doubtless give authorities on other subjects equally contradictory,

and we publish opinions for and against various matters with equal feelings of respect that the writer's personal views are correct. At the same time we wish it distinctly understood that those opinions may not be our own, and consequently that we do not pledge ourselves to the arguments that may be contained in them.

✤

In France just now we find enormous interest is being taken in the matter of combination of the film trade for mutual protection. In the *Phono-Cine Gazette*, published in Paris under date March 1st, Monsieur Francois Valleiry reviews the work already accomplished under the auspices of his journal, which, briefly put, embraces:

1. The formation of the "General Cinematographical Association."
2. Competitions for and a Congress for the International Exposition of Cinematography.
3. A school to grant diplomas to practical cinematographers.

✤

Monsieur Valleiry, with whom we recently had an interesting interview, is now advocating the formation of a union of professional Cinematographers, and puts the value of combination very clearly before his readers. He says that no force exists like a powerful union. and that charity should begin at home, and consequently professional Cinematographers must protect each other. To attain this sub-committees for various purposes are to be appointed, which will act under the supervision of the parent association.

✤

Great stress is laid on the too stringent police regulations in France, which are unnecessary now owing to the total absence of risk to life and property at the present day, by the approved apparatus in use. The enforced use of a cabin costing at least 500 francs is deprecated, and when, in addition to this, the cost of mounting and dismounting the cabin, the transport charges, and the rents of the halls are taken into consideration, makes it small wonder our French friends are combining to obtain alterations. One of the duties of a sub-committee is to study the different inventions which are put forward to obviate the use of a cabin, from the simple metal boxes in which the film is wound and re-wound to the "reduced cabin" which contains the apparatus but *not* the operator. After eulogising the Parisian police—a very wise proceeding to commence with—he goes on to explain how the newer and cheaper forms of cover must eventually be adopted, in place of the cumbrous and expensive cabins, and hopes everyone will seize opportunities to point out to the police the absurdity of the present formalities. We can sympathise with M. Valleiry when he complains that "the formalities to be gone through when permission is sought to give one single Cinematograph representation are nearly as considerable as those necessary to obtain permission to open a permanent theatre."

✤

The primary objects of dealer and manufacturer are to make money. The former hopes to do so by purchasing goods from the latter at the lowest possible prices and selling to the consumer at an enhanced price sufficient to cover all his running expenses and leave a margin over. The trouble is for the dealer to determine the real selling value of the articles he wishes to retail. He is apt to be led away by showy appearance and low cost, snares which unfortunately too many manufacturers are baiting their hooks with, and which catch the dealer in his weakest side. In lanterns, cameras, etc., an extra coat of paint or bright plating conceals many a defect, which time and the user soon lay bare. It is a mistake to sell goods of this description for a trifling addition to profit, as the dealer is soon condemned as a seller of rubbish. The market just now is being flooded with cheap grades of lanterns, living picture projectors, cameras, and accessories. which are evidently made to sell quickly, and we urge dealers for their own interests to look carefully into these contrivances before placing their orders. A good business connection is built up by fair dealing and by using the knowledge you have so that your customers may put trust in your recommendation of the goods. Therefore prove the value of your goods and don't sell shoddy and cheap articles, which you know show a larger margin of profit, but which fall to pieces on the slightest provocation.

THAT Great Britain is recognised throughout the world as the most thorough in its manufacture of mechanical contrivances is repeatedly brought to light, but to us particularly is it so with regard to the optical lantern trade. Hardly a week passes but we receive letters from distant parts asking for advice in the selection of lanterns and apparatus. As we go to press we received an interesting letter from Mr. C. J. McMullen, of Utica, U.S.A., who says:—"I like the talks on various subjects given in your valuable paper, which are particularly useful to those who are not on the spot, and help them to get acquainted with the latest inventions. I expect to finish the season out here, and next season intend to select a first class outfit in London for use in this country. The lanterns and machines over here are a disappointment, they look as though they were built in a tin shop, and have very little that is optical about them."

ANOTHER correspondent writes that he is starting for the North of Africa, and wishes to invest a £100 in lanterns and apparatus suitable for the production of living pictures among the country people. He is over here to make purchases, and has been surprised at the low prices at which certain goods have been offered to him. These he wishes us to advise him on. He writes:—"There is a firm in America which undertakes to supply a complete exhibition outfit for 91 dollars, which is said to be absolutely perfect for high class exhibition work, and money is willingly refunded to the purchaser if the outfit is not found as represented. The outfit includes everything needed, a jet for calcium light, a cinematograph in case (said to be the simplest and best made in the world for so small an amount of money), a screen (120 feet square), 500 illustrated posters (18 ins. by 34 ins., with attractive engravings), 2,000 admission tickets, a printing outfit for filling in dates, and an instruction book and business guide, the latter containing complete information on the operation of the outfit, particular attention being given to business management, based on the actual experience of the most successful exhibitors and lecturers." Our correspondent asks us whether we think he would do well to purchase this outfit, or if it would be better for him to buy from some London firm. We have not had experience of this remarkable outfit, but it sounds too enticing. We certainly think he would be wise in selecting a well-known maker, and purchasing a machine that has a reputation, in preference to purchasing too many etceteras in connection with the machine.

ANOTHER writer from Spain wishes us to determine for him which firm to go to purchase an outfit. Here, again, it would be invidious to make a distinction. We have collected lists from various firms and forwarded them to him, in the hope that he may determine for himself which would be best adapted to his requirements. We can only advise him on certain matters, and must decline to pin our faith to any particular make.

AS we finish the above, the post brings the following testimonial from Bulgaria:—"Sofia, 12 March, 1906. Dear Sir,—Your journal—THE OPTICAL LANTERN JOURNAL—is to hand. Only No. 5, Vol. 2, March, 1906, but the others I have not. Dear Sir, for this your journal I was simply longing from long years ago. And its appering now to me is like a sunbeam in a cloudy day. My strong bileve is that your journal will be to me like a gueding star in my futur live in my work, and most interesting reading mater to me. Trusting, Sir, that you will sent me all the nomber of the journal from that 1906, I remean yours very truly, H. TILEFF." Address — Huben Tileff, "Evangelical Society," Sofia, Bulgaria.

THE OPTICAL LANTERN AS AN AID TO EDUCATION.

No. III.

By J. A. Waterston.

IN previous articles I had occasion to mention the old Polytechnic. I have since, through the courtesy of Mr. W. H. Lambert, been able to obtain some interesting information about the use of the lantern and cinematograph by the Education Department of the present institution. The "Poly" of to-day is a worthy successor to the parent establishment, which, years ago, so carefully fostered the adaptation of optical projection to educational uses. It has now far surpassed most of its contemporaries, chiefly by having early recognised the splendid usefulness of the cinematograph in elucidating the technical difficulties which so frequently arise in connection with its science and other classes. It now makes use of the instrument quite impartially, as occasion requires, to provide either instruction. amusement, or a judicious blending of both. As a means of combining instruction with amusement for the very poor, the Polytechnic sends round a lantern, accompanied by a good selection of slides, to the poorer districts of London. Sometimes an entirely free lecture is given, at other times bare out-of-pocket expenses are charged. By this arrangement thousands of people are enabled to spend an interesting evening without expense and enjoy a welcome rest of mind and body.

There is a Polytechnic lecturer continually travelling over the United Kingdom, accompanied by a combined lantern and cinematograph apparatus. His lectures are arranged to illustrate the Polytechnic tours, primarily of course by way of advertisement, but they are also compiled with a view of obtaining the greatest degree of educational value, and much carefulness is exercised in presenting true pictures (orally and pictorially) of the country or countries under review.

This is a case of "Try before you buy." A man who wishes to go to a foreign land can previously be shown what it looks like, and if it does not come up to his anticipations, may change his mind and "try another!" The enterprising management have despatched representatives to the following countries for the purpose of obtaining cinematograph records: France, Norway, Sweden, Italy, Switzerland, Russia, Germany, and Spain. The result is that they have accumulated a very extensive library of really good films and slides, which thoroughly justify the statements in reference to the educational value of the lectures.

ARCHITECTURE & ENGINEERING.

In its architectural and engineering classes the Polytechnic executive consider the combination of the lantern and cinematograph to be indispensable for the scientific presentation, in fullest detail, of the many subjects requiring explanation which appertain to the construction of a

building or of a piece of machinery. In most cases the illustrations projected cannot be found in any book, and yet are very necessary to the careful consideration of the subject, and when some difficult operation in building or engineering is visually demonstrated by motion pictures, the effect on the student's mind and memory must be immeasurably more lasting in character than under the old-time system of methodical, often degenerating into mechanical, study of books alone.

BIOLOGY.

The students of biology, by means of an ingenious microscope attachment to the optical lantern, have their lectures illustrated by representations of the actual object mounted on the miscroscope slide.

The use of the blackboard at the Polytechnic, as regards illustrating a lecture, is practically nil. The optical lantern takes its place and does the work most effectually, and the teacher is able to devote more time to explanation.

The Polytechnic day scholars are given a weekly lecture on popular science, illustrated by the lantern, and so on, *ad infinitum*. Indeed, when one inquires more minutely, and is told the number of optical lanterns in use, the backwardness of so many of our schools is painfully apparent.

The high estimation in which this means of communicating instruction is held at the Polytechnic can best be appreciated by mentioning the fact that the authorities are owners of three triple lanterns, two biunials, and twelve single lanterns. Such facts as the above should be quoted as an example by manufacturers of optical apparatus, and would doubtless be instrumental in extending business amongst teachers of every grade.

Have you seen

VOLUME I

of the

Optical Lantern and

Cinematograph Journal.

CORRESPONDENCE.

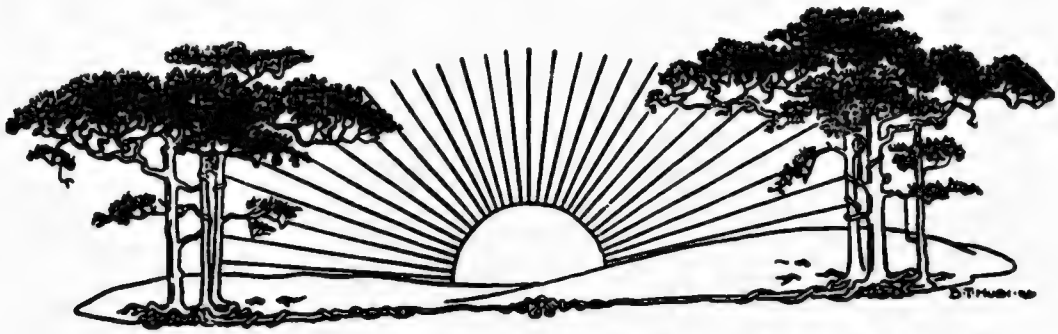
ACETYLENE, OXYGEN AND ELECTROID.

SIR,—Can you give any information as to the illuminant Electroid, as per enclosed cutting. Has it ever been placed on the market for lantern purposes? Do you know anything of Acetylene as mentioned in enclosed newspaper cutting?—Yours respectfully, T. WHITMORE, Cubbington, Leamington.

"ACETYLENE.—This gas has not been utilised either for photography or cycle lamps to the extent which was anticipated. The addition of oxygen has been suggested many times, but the explosive nature of the mixture, except in definite proportions, has prevented the adoption of this plan. At a demonstration given at the Royal Institution, Mr. J. Reid injected a stream of oxygen into the flame of acetylene, and the intensity of the flame is said to have been raised from 150 to 2,000 candle-power. We have tried acetylene in the lantern, but it has never given sufficient light, and if this method is satisfactory in its working its application to the lantern will prove useful."

"At the beginning of the century the British public had nothing better than oil lamps and 'farthing dips' to guide their footsteps through the darkness. Since then there has been a long series of triumphs over old night, and there is still another victory to record, says the *Northern Daily Telegraph*. At Halifax, during the last fortnight, there have been practical demonstrations of the qualities and power of a new illuminant which promises to become one of the lights of the future. The non-smelling, deadly fumes which proved fatal to the water-gas boom of a few years ago and the explosive properties of acetylene are qualities which are entirely absent in the new illuminant, which the inventors, Messrs. Marsh and Thorpe, of Manchester, have named 'electroid.' In its elementary stages of manufacture electroid is identical with acetylene. It is produced by the action of calcium carbide on water. But the acetylene afterwards undergoes a process by which it is so treated as to remove its dangerous qualities, and the result thus obtained is the new illuminant electroid. It burns with a non-smoky flame of much brilliance and purity. Perhaps the most noticeable feature about it is the absence of 'flash' or glare so characteristic of the electric light. It is claimed for it that it is more like daylight than any illuminant that has yet appeared. An experiment by a local amateur in photography the other day resulted in a decided picture being produced by the electroid light under conditions in which the ordinary gaslight utterly failed to produce a result.'

[The extracts our correspondent sends appear to be cuttings which are practically out of date at the present time. Since October, 1898, very great progress has been made with acetylene, and almost any cuttings of that date would be entirely obsolete. Acetylene is very extensively used at the present for lantern and ordinary photographic work. The firm spoken of supplying acetylene under the name of 'electroid' gas we believe is defunct. Referring to using acetylene and oxygen for lantern purposes, if this could be used on to a lime the same as coal gas, and oxygen, it would certainly give a very great candle power, but it is too dangerous to do and cannot be recommended, at any rate, for amateur use.—ED]



AN INJUSTICE TO BRITISH INVENTORS.

By Paul Bock, A.M.I.E.E., M.S.C.I.

The introduction on January 1st, 1905, of the system of examining patent applications with respect to the novelty of their subject matter, has naturally resulted in a considerable delay in the time required for acceptance, whilst unexpected disadvantages have arisen from the fact that the inventor is, in consequence of such delay, frequently deprived of his foreign patent rights.

The inventor, or the capitalist who finances him, is naturally unwilling to invest money in taking out foreign patents until the British Patent Office has concluded its search and reported on the novelty of the invention, at least as far as this is affected by the prior British applications of the last fifty years. As soon as the specification has, if necessary, been amended to the satisfaction of the Patent Office, the application is accepted and the specification printed.

The conclusion of the examination and the acceptance of the application, however, in more than 40 per cent. of the cases of British origin, takes place only in the twelfth month after the application is filed, and in these cases the inventor, or his capitalist, is enabled to decide whether or not it is advisable to apply for foreign patents only when it is in many cases no longer permitted possible to do so, in consequence of the fact that foreign patents must be applied for within one year from the date of the English application.

This period of one year is, however, of special importance, as under the International Convention to which most civilised countries belong, a British inventor is able to file an application for his invention within one year from the date of his British application in any country which is a party to the Convention, and has, moreover, the right to claim for such application exemption from anticipation by any prior application of a date later than that of his British application. To give an example: If an inventor has applied in England for a patent on the 12th of September, 1904, and in France on the 11th of September, 1905, he will, by claiming the benefit of the Convention, be able to avoid anticipation by any prior anticipation not earlier than 12th September, 1904.

If, however, this period during which priority can be claimed has elapsed, the British inventor can only obtain patents in a few commercially unimportant countries, as, subsequent to its acceptance, the printing of his specification has made his invention public knowledge.

In this manner the inventor is robbed of his success, and he will feel the injury most keenly when he sees how the invention which he with infinite pains reduced to practice is exhibited abroad to the enrichment of others, who contributed nothing towards its success.

The many questions that in the course of my practice have been addressed to me by inventors resident in England, has led me to enter upon a public discussion of this question.

Is there any possibility of securing to the British inventor his rights in his invention? Because, in the great majority of cases, it must be assumed that the hand of the capitalist will only open after the validity of the patent has been established.

I am of opinion that there are two ways in which the British inventor may be helped. The first is not to print his specification immediately upon its acceptance,

but to delay the printing until the sealing of the patent; this would afford considerable relief, as the fact that the specification has been open to public inspection would not interfere with the grant of patents abroad, so long as it remains unprinted. England is the only country in which the specification is printed immediately upon acceptance and before the patent has been granted. In all other countries it is open to public inspection in order to enable interested individuals to take notes or have copies ready, but it is not printed until the issue of the patent. By prematurely printing the specification the state frequently robs its subjects of their foreign patents. If the printing of the specification were delayed until the time for sealing has arrived, or, as is the case in France, until a month or two after has been granted, it would be rendered impossible for the inventor to be thus injured.

A second method, offering still greater advantages, would be that England would become a party to an union independent of the International Convention, and should thereby secure to its subjects still greater advantages. The present parties to the union referred to are Germany, Austria, Hungary, Switzerland, and Italy. The agreement between these countries is not based on a general convention, but on separate treaties, which have been provided for by the laws of the various countries.

The alliance of England to this union would in no wise interfere with the International Convention. Such a contingency has already been provided for in the German and Austrian laws, and England need only accept the advantages proffered. The most striking feature of this union consists in the fact that a citizen of any of the countries belonging to it secures the legal right within three months after the grant of his patent at home to apply for patents in all other contracting states.

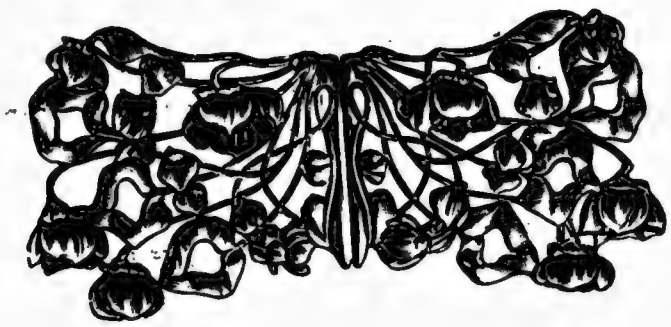
The main advantages to be derived from alliance to the union, however, consists in the fact that it enables patented articles to be introduced into the contracting states for an unlimited period.

As the patent laws of most countries are framed for the purpose of promoting native industry, these laws in most cases allow patented articles to be introduced only during a limited period, varying from one to three years. Subjects of states belonging to the union are, however, privileged in so far as they are entitled to introduce patented articles during the whole life of the patent.

The alliance of England to the union would consequently result not only in giving its subjects the right to file applications three months after the British patent has been granted, but would also ensure that the report from England of such patented articles would not be interfered with.

This is of very great importance, as Germany, one of the most important parties to the union, is, after India, the greatest buyer of English goods, and the increase in her export trade which England would derive from alliance to the Union, would consequently be of inestimable value.

It is hoped that the above remarks may, by directing attention to the advantages to be derived, form the starting point of an agitation in favour of the alliance of England to the union, and that those who are favourably impressed by the advantages offered will not let the matter drop, but, whether directly interested or not, will, as opportunity arises, do their utmost to promote the agitation.



ITS USES AND ADVANTAGES AS AN ILLUMINANT.

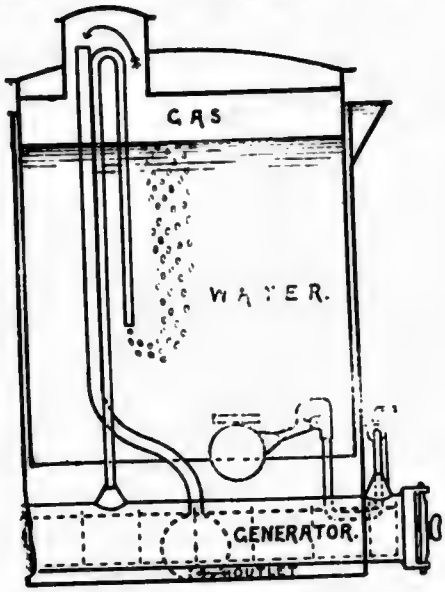
(Continued from last month.)

THE considerations necessary for the combustion of materials to produce heat or light, referred to last month, apply to no combustible gas with greater force than to acetylene. It possesses an extremely powerful and offensive odour, which is one of the properties which renders its presence as an impurity in ordinary coal gas particularly objectionable; it is extremely penetrating, so that the stop-cocks and joints used in its supply need to be very well made, with a large bearing surface in the moveable parts, and to fit very accurately. It has also a powerful chemical action upon copper, rendering that metal unsuitable for apparatus used for its preparation or fittings with which it comes much in contact. So readily does it deposit soot, when burned under unfavourable conditions, that it has been found necessary to contrive a burner in which the flame shall not come in contact with any solid substance; should it do so, carbon in small particles would at once be deposited and the passage of the gas obstructed if not completely choked. Only experience could have shown the special conditions needed for its convenient and advantageous use, but, being known, they are readily fulfilled, and at no great cost, and the generation and use of acetylene, without either waste of material, excessive heat, disagreeable smell, or discharge of smoke or soot, is placed at a moderate cost within the reach of everyone who has occasion for its use and desires to avail himself of the brilliant and very white light which it is capable of yielding.

The Thorn and Hoddle Acetylene Co., Ltd., of Victoria Street, Westminster, to whom we are indebted for the illustrations which accompany this article, have given their special attention to the construction of appliances for the generation and supply of this gas, and have succeeded in perfecting apparatus suitable for the small or occasional consumer, or for the lighting of entire towns, or groups of buildings, as may be required, the gas being prepared and purified in perfectly air tight vessels, which suffer none of it to escape until it reaches the jet from which it is to issue for purposes of lighting or heating, where it is burned entirely without smell, for, powerful as is the odour of the unburned gas, the products of combustion, unlike those yielded by ordinary coal gas, are free from smell and have no destructive effects upon furniture, books, and other articles which frequently suffer so greatly in gas lighted rooms. The flame yielded, though small, is, as already stated, very brilliant, and in quality more nearly resembles daylight than that of any other artificial illuminant, rendering natural colours with great accuracy.

It has been stated that the generation of acetylene commences immediately the calcium carbide comes into contact with water, much heat being evolved in the process. The various methods of generating it usually depend either upon pouring or sprinking water upon the solid carbide or allowing the latter to dip into water, from which it is withdrawn, automatically or otherwise, when it is desired to stop or check the production of gas. When the quantity required is consider-

able, or a continuous supply is needed for some hours, this Company use the commercial size carbide broken to pieces of 2½ inch mesh, averaging about the



"INCANTO" SYSTEM.
PRODUCING THOROUGHLY WASHED, COOL GAS.
YIELD 97% GUARANTEED.

size of the ordinary lumps of sugar used on our tables, or slightly smaller, in a sort of drawer divided into several compartments and communicating with a gas holder similar in design to those used in gas works, at the bottom of which water is placed. When the evolution of gas is to commence, the water is permitted to enter the first compartment of the generator and come into contact with the carbide contained in it, when the gas at once passes through the water and enters the gas holder, which, as it is filled, commences to rise, and in doing so carries with it the lever of a sort of ball tap fitting, which gradually closes a valve and cuts off the supply of water to the carbide and checks the evolution of gas.

When the gas is turned on at the burner, and begins to flow towards it, the gas-holder, being gradually emptied, descends and, in doing so, re-opens the valve and once more admits water, causing the production of acetylene to be resumed, and this continues until the supply of carbide in the first compartment is exhausted or completely converted into lime, when the water is automatically directed to that in the second compartment, the same process being continued until the entire charge is exhausted, when, in the larger forms of generator, a second set of compartments can be utilised, the first set being disconnected from the supply pipes to be emptied and re-charged. All these actions are quite automatic, and the stop-cocks and joints are so accurately fitted that no escape of gas can occur. Before reaching the burners, the gas been caused to pass through a filtering chamber containing calcium chloride and other substances packed between layers of specially prepared cotton wool. By this means it is thoroughly dried and cleansed from dust and impurities, so as to ensure its burning with a clear white luminous flame entirely free from smoke, haze, or noxious emanations. This filter requires re-charging every three or four months if the apparatus is in constant or very frequent use, or at longer intervals according to circumstances.

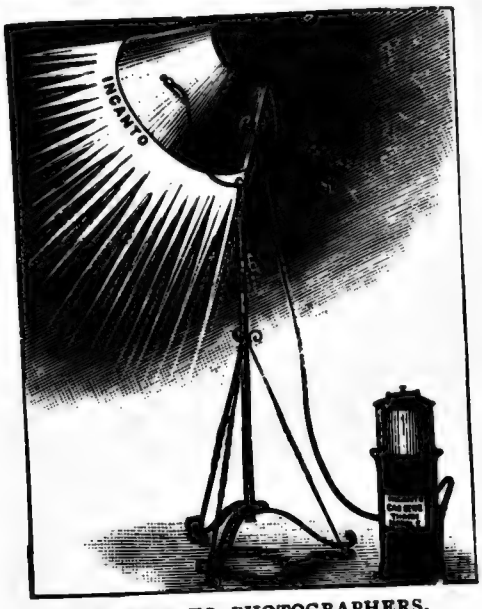
While it is important for lighting purposes that the carbon set free from this or any other hydro-carbon should remain in the solid form sufficiently long to become brilliantly incandescent, being completely consumed before finally leaving the flame and entering the air; when heating is required, as for cooking or manufacturing purposes, it is desirable that the combustion should be so complete as to give a non-luminous flame, almost colourless, and barely visible in still and clean air; and here again it has been found practicable to arrange the supply of acetylene and atmospheric air so accurately as to produce an intensely hot but perfectly smokeless and inodorous flame, either in the Bunsen burner used in chemical laboratories or in the ordinary gas heating or cooking stove or oven of domestic life.

Our first illustration shows the village street of Hillesley, near Wotton-under-Edge, in Gloucestershire, which is lighted by eighteen lamps consuming acetylene gas generated and supplied in the way described above. This installation has been in operation for the past seven years and is still working efficiently.

For the purposes of the photographer and the lanternist, acetylene offers many advantages, and its use for these purposes will probably give it its greatest interest to the readers of this journal. The light yielded is exceedingly rich in actinic or

ACETYLENE IN USE FOR PROJECTING.

ultra violet rays, and when a number of burners are arranged in the focus of a reflector, as shown in the illustration, a beautifully white light is secured capable of giving a good result with an exposure of three to five seconds, on rapid plates with the full aperture of a portrait lens, and corresponding exposures under other familiar conditions. It is also well adapted for printing from negatives in



A BOON TO PHOTOGRAPHERS.

dark weather, where an electric installation is not available or would prove too costly. This appliance, in its most powerful form, is supplied with thirty-seven non-carbonising burners, giving an illumination approximately equal to 2000 standard candles, and completely at the control of the operator, who can turn the light down to any point required without affecting the perfectness of combustion or causing any inconvenient or undesirable results.

For the puposes of the lanternist a simpler form of generator is required, since the quantity of gas to be consumed in the course of an exhibition is small, and lightness and portability are of the utmost importance.

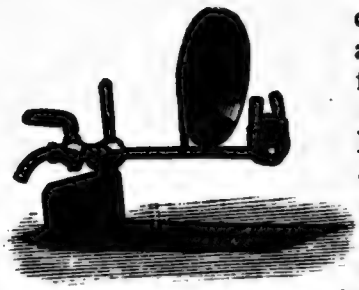
While a brilliancy equal to that of the limelight cannot be claimed for acetylene, it yields a whiter and more intense illumination than any other form of artificial lighting can supply, and as the consumption of gas for each burner is very small, about half a cubic foot per hour, the weight of the apparatus and the quantity of material to be carried is comparatively trifling. In the generator used for this purpose the carbide is contained in a sort of perforated metal basket, which is attached to the gas receiver, and comes into contact with the water at the bottom of the outer tank or vessel when the receiver is empty, and is lifted out of its reach as it rises, descending again to permit the process of generation to be resumed, when the holder needs replenishing. Such a generator, weighing about 9½ pounds, and using about one pound of carbide in the course of two hours, can be obtained for twenty-five shillings, while one of double the capacity costs ten shillings more, and a still larger size can be had at

proportionate price, the second of these being probably the most generally useful.

THE ACETYLENE LIMELIGHT.

It will be remembered that for lantern and Kinematograph illumination a small flame is of the utmost importance, with high intrinsic brilliancy, since it is not practicable to condense the rays from more than a very small radiant or luminous surface upon the lenses used in projection so as to pass through them, and any rays which fail to do so are worse than wasted, since they may escape into the room and only serve to confuse the image. In order to secure a very small and brilliant point or surface of light it is found best to cause two or still better three flames placed with their edges towards the condensing lenses, to unite or impinge upon each other, and three such flames well adjusted and working at the best advantage are said to yield an illumination of from two to three hundred candle power, with a consumption of less than four feet of acetylene per hour, yielded by about one pound of calcium carbide, after allowing for possible impurities in the commercial article which cause it to yield less than the theoretical quantity of gas.

The 2-flame burner shown in the illustration can be obtained for 7/6 to 9/6, fitted with a tray ready for insertion in any ordinary lantern, and the three-flame burner for 10/6 to 13/6, the latter being the one most likely to be useful unless a very small disc is required.



The writer has several times been placed in an embarassing position in a country town or village where the usual sources of supply or means of obtaining assistance in cases of emergency, owing to the absence of a local gas supply or the inferior quality of that in use. No other satisfactory means of illumination has in such cases been available, and it has been with extreme difficulty, not always unattended by delay, that the want has been supplied in time to be of any use. So simple and easily manipulated an appliance as an acetylene generator would, in such a case, have saved much labour and anxiety, and the result finally attained would probably have been more satisfactory than those actually reached by the methods which had perforce to be adopted.

No doubt the prudent lanternist will take care to forsee such contingencies and provide against them, and will usually succeed in doing so, but chance happens to all men, and sometimes the best laid schemes go astray from unforeseen and unforeseeable causes.

There can be no doubt that for a disc of moderate size, and where a heavy and expensive outfit is neither necessary nor desirable, acetylene gas furnishes a very convenient and efficient method of lantern illumination, and one which can be used with entire safety, and with the minimum of inconvenience and expenditure of time.

The flames are under perfect control, and with the specially designed dissolver, which has a large bearing surface, can be turned down to an almost non-luminous flame, especially when the threefold burner is used, without risk of extinguishing the flame or interfering in any way with perfect and smokeless combustion. so that it lends itself to dissolving equally well with any other method of lighting, and can be employed in bi-unial lanterns without any practical difficulty.

NEW FILMS.

THE month of March, with its boisterous weather, has not been ideal for the camera man, and this may have something to do with the few really good films we now have to recall. Another reason may be that very few really big events have occurred, in fact, with the exception of the invasion of our streets by the Jap sailors, little of note has happened.

NONE of the "turns" at the special performances given for the Japs' benefit, or the London sights they witnessed, were received with such ovations of praise as the living picture shows. And great wonder was expressed on their faces when the film, showing their landing at the Docks, was exhibited, and their shouts in vain for a repetition were difficult to subdue. The Coliseum, Alhambra and Lyceum vied with one another in showing films of suitable subjects. Naval scenes were specially well received, and they seemed to recognise and be very interested in pictures of the death of Nelson and the Victory, with the Admiral's flag outlined in electric light; Lord Charles Beresford with his bull dog, and various other slides connected with nautical matters. When at the Crystal Palace several of the tars gave a little ju-jitsu exhibition for the benefit of a cinematograph operator. Others, again, witnessed the animated photographs displayed in the Electric Theatre. With some surprise and more delight they beheld pictures of their own triumphal processions through London. But most of all they rejoiced when there came upon the screen the portrait of the victor of Tsushima, their own Admiral Togo. Every man started up and saluted the picture.

CHARLES URBAN & CO. are to be congratulated in having obtained the exclusive rights for special stands erected on the course at various points of the Grand National Race, which was run at Aintree, Liverpool, on March 30th. A special van on a North-Western train was equipped as a dark and developing room, so that at night a complete picture of the race might be shown at the Alhambra. The picture came on towards the close of the evening —about six hours after the race—and, of course, as an achievement of quick work was a wonderful production, but for high artistic merit there was much wanting. The fact that a representative of a sporting paper, who was with us at the reproduction and who had attended the race, could point out the respective horses, showed that the film was true and distinct. This in itself must be gratifying when the dull day is taken into consideration, for although no rain fell, the light was bad. We understand that this firm also have the sole rights for filming the Cup Tie at the Crystal Palace.

CRICKS & SHARP have produced two more comics which should be in request. "The Tell-Tale Telephone" has a euphonius title and is full of rollicking fun, in which the office typewriter and jealous wife play interesting parts. "Billiard Football" is a most amusing picture of a party of ladies and gentlemen placed each side of a billiard table on which are arranged goal posts and an egg shell. The game is played to ordinary football rules, the "ball" having to be blown towards opposite goals by each team. The facial expressions of the players (who quickly become winded) and the efforts of each side to score are most amusing—especially towards the end of the game when a goal is scored.

MR. R. W. PAUL has a good film this month entitled "Mistress's Finery, or a Case of Mistaken Identity." The mistress is seen dressing in her bedroom, preparatory to going out, assisted by her servant. Mistress having left the room, servant listens at door to make sure she has gone out, and then proceeds to try on some of her mistress's clothes and hats, decking herself up before the looking-glass with her back towards the door. Presently the door opens, and the master of the house appears unnoticed by servant, who goes on with her dressing. Master, thinking it is his wife, creeps up behind and gives her a kiss, at which point the mistress returns. Confusion of servant, helpless dismay of husband, and furious indignation of wife, who orders servant out of the room, and then demands an explanation of her husband. He tries to smooth matters over by explaining the mistake he has made, but wife does not believe the tale, and, after giving him a good nagging, leaves the room.

Round and About.

"Whale Hunting"

Is still being well received, and proves an interesting and exciting attraction at many halls in the provinces.

Free Libraries

Are in future to have provision made for lecture rooms, and a stipulation is that ample accommodation shall be made for lantern work, which is to be deemed an essential necessity.

Mr. Walter Jeff,

Of the New Century Co., make an excellent feature in his picture shows. He blends humour and pathos with education, and makes a point of having, at each show, one film representing a trip to some continental city or country.

The Chronophone

Is well on tour, and is meeting with success in every town visited. In March, Swindon, Reading, Colchester, and Woolwich were favoured, and in April, Swansea, Cardiff, Exeter and Southampton are the fortunate places at which shows are to be given.

The Water Flea.

During the recent epidemic of this insect in Edinburgh, a bottle of them was sent to Urban & Co. and put under the microscope and filmed. These films proved highly attractive, and their hideousness was of great interest to the crowds, many of whom had been victims.

Two useful Books

That are sent for the asking, should be in the hands of every reader. Butcher's issue an attractive booklet entitled "Popular Photography," which contains much that should be useful to slide makers who use the summer months for photoing subjects. Messrs. Cricks and Sharp have issued a catalogue of the "Queen" bioscope and films, which contains particulars of many excellent goods.

Mr. G. J. T. Walford

Recently gave an interesting evening on lantern slide making to the members of the Southend-on-Sea Photographic Society. He stated that he preferred making all slides in the camera, and by daylight, using a developer composed of: (1) Pyro, 1 ounce; potassium metabisulphite, 1 ounce; water, 80 ounces. (2) Ammonium bromide, 8 ounces; liquor ammonia, 4 ounces; water, 80 ounces. This gave a purple tone. For warm brown tones he recommended: (1) Pyro, ½ ounce; potassium metabisulphite, 60 grains; water, 10 ounces. (2) Sodium carbonate, 600 grains; ammonium chloride, 120 grains; ammonium bromide, 120 grains, water, 10 ounces. He recommended iron perchloride for reducing slides.

Annual Exhibition and Conversazione

Of the Sheffield Photo Co. On March 8th, an interesting exhibition was held in the Cutlers' Hall. Many beautiful prints were on view, and also the very latest things in cameras and photographic apparatus. Enlargements from quarter-plate negatives were a special feature, and attracted much attention. The Sheffield Photo Co. have in recent years acquired a reputation for the excellence and novelty of their films, and as a result of the increasing demands on the department extensive additions have been made. Mr. F. S. Mottershaw is in charge. Several clever films were shown for the first time. A particularly clever picture was entitled "Our boyhood days." Another capital series, "Lost in the snow," showed a child caught in a storm and rescued through the sagacity of a dog. The photographs were obtained after the recent snowfall. Certainly the Sheffield Photo Co. is determined to lead in North of England cinematograph work, and the afternoon and evening entertainment they gave showed how important a position they now hold.

The Month's Lectures.

Many lantern lectures have been delivered during March, and some of them have been exceedingly interesting. At the Mildmay Radical Club, Mr. Joseph Chinn, who has a remarkable knowledge of Paris, was very interesting in his lecture on "Modern Paris." Lady Knightly, under the title of "My Experiences in South Africa," showed some beautiful views of the scenery and flora, and gave a very interesting evening at the Women's Institute. The Rev. W. Souper, in "Personal Recollections of the late Queen Victoria," showed an inside knowledge of his subject, and his limelight views of Balmoral Castle and its surroundings made a very successful evening. The new agricultural movement in Cape Colony has been heralded by the lecture by Mr. P. J.

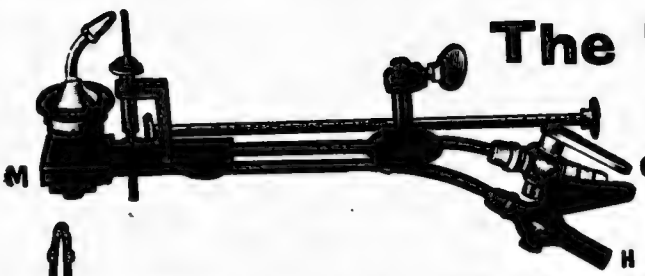
Hannon, who is the Superintendent of the Agricultural Organisation, and is visiting this country. The illustrations brought home the truths conveyed in the lecture. Mr. Cyril Devonport, at the Society of Arts, gave an extremely interesting lecture on the origin of the Royal Arms, and illustrated it with slides of heraldic bookbinding, seals and plates tracing the evolution of our Royal Arms. At the Royal Horticultural Society a lecture on "Parasites and Saprophytes among Flowering Plants," was given by the Rev. Prof. G. Henslow.

At the Court of Morocco.

At the Blenheim Club last week, Mr. C. Rider Noble gave a lecture on "Morocco, its Court, People and Customs," illustrated by 130 lantern slides and seven animated pictures. Mr. Martin Duncan presided. Mr. Noble spent three years at the Court of Morocco, and was on friendly terms with the Sultan and his Ministers. He was thus enabled to take photographs of scenes, incidents, and persons that the ordinary visitor would not have been allowed even to see. One picture showed Lord Loch in a tall busby and Lord Castletown wearing a helmet, with the Sultan between them holding their handss His Sherifian Majesty was so impressed by his visitor's headgear that he insisted on keeping both a-mementoes. Many beautiful views of the surrounde ings of Morocco town were shown, and many lifelik, portraits of the Sultan and his officials. The street scenes in motion included a march of the troop, against the Pretender, the Sultan leaving his palace. to review them, and holding a reception of the tribes and receiving presents. The instrument used for the projection of the Kinematograph pictures was of a new type, and has the advantage that it can be stopped at any moment to enable the lecturer to give an explanation of any particular incident.

Recorders of the Future.

Will the day ever come when makers of bioscopical records will have to send two copies to the British Museum, two copies to the Bodleian Library, Oxford, and so forth, according to Acts of Parliament made and provided? If our rulers remain in the same mind as for all these years they have, about taxing a poor author to supply gratis specimens of his work, there are more unlikely things than a National storehouse for records, a British Museum up-to-date, made for use with the old library remaining more as a collection of curiosities than for working purposes, and kept going for the benefit of students. The expense of running the new system may render impossible making the museum of the future a free show, but there it can be, so that for any occurrence which has been arrranged beforehand you will, instead of reading about it, be able to go and see, years and years later than the incident's happening, the thing or its possibly accurate counterfeit presentment. When I say you, I hope you will, Refereaders, because this state of affairs will not materialise yet awhile, and my hope you may take as a sort of "Long life to you!" Whether the time that is coming will be a good one for folk of my trade is open to question. Unpleasant possibilities suggested themselves to me directly the the kinetoscope—or whatever the photo-electrical development of the old Zoetrope was called—was open to public view and exhibitions of its working pictures given in Paris. Some day, says I, we—meaning the men who do reporting of sorts—will not be wanted for any athletic sports or other event whatever for which arrangements are made ahead. These inventors will bring their rotary pictorial art to such a pitch as to be able not only to get all the negatives they require in the way of picturing details, but to combine it with phonography so as to have a speaker suiting the word to the action and the action to the word. Then a year, ten years, fifty years after date you can hear what he says and see how he says it, and so can the generations to come, century not specified. Out of this system was to grow the newspaper of the future, with electrical service lines of wire laid on all over the place ready to be tapped by subscribers or on the penny-in-the-system—having paid your money you can take your choice—and on pressing the button, or act to that effect, see and hear what you want. Probably some little skill might be needed to successfully carry out what would be by way of a shipping order; still, seeing how far we have gone in a very short time indeed, who is to say how the ideas being exploited at present may be expanded in the near future!—*Referee*



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and

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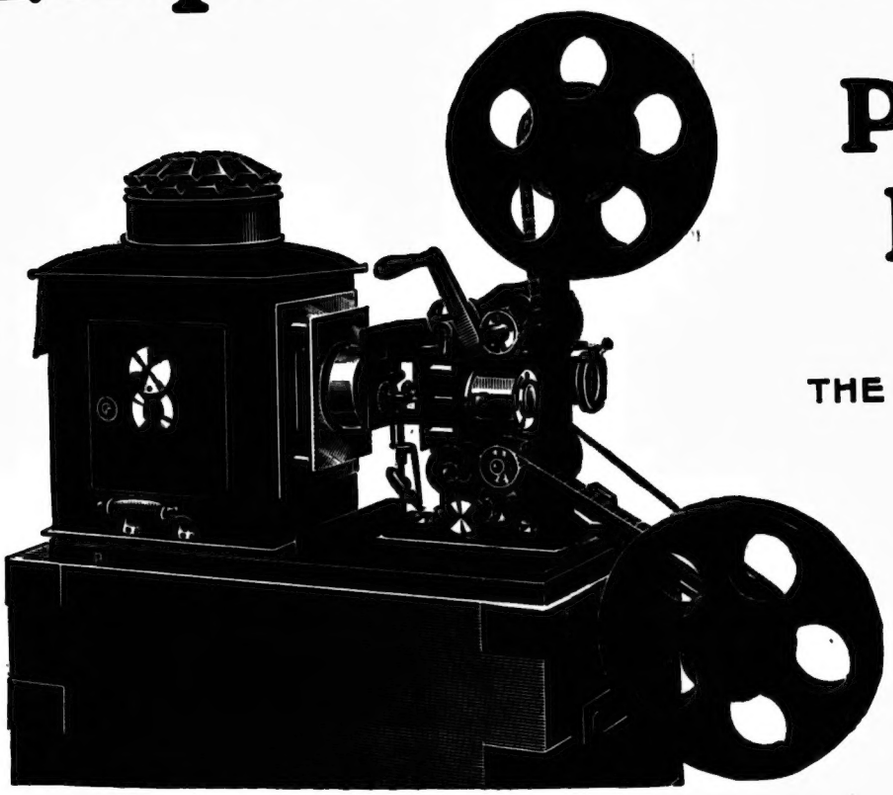

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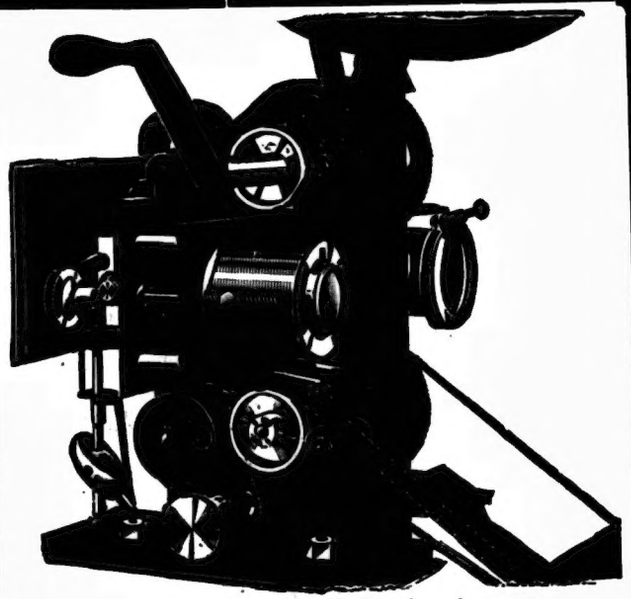

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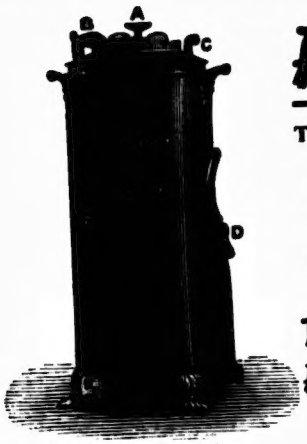

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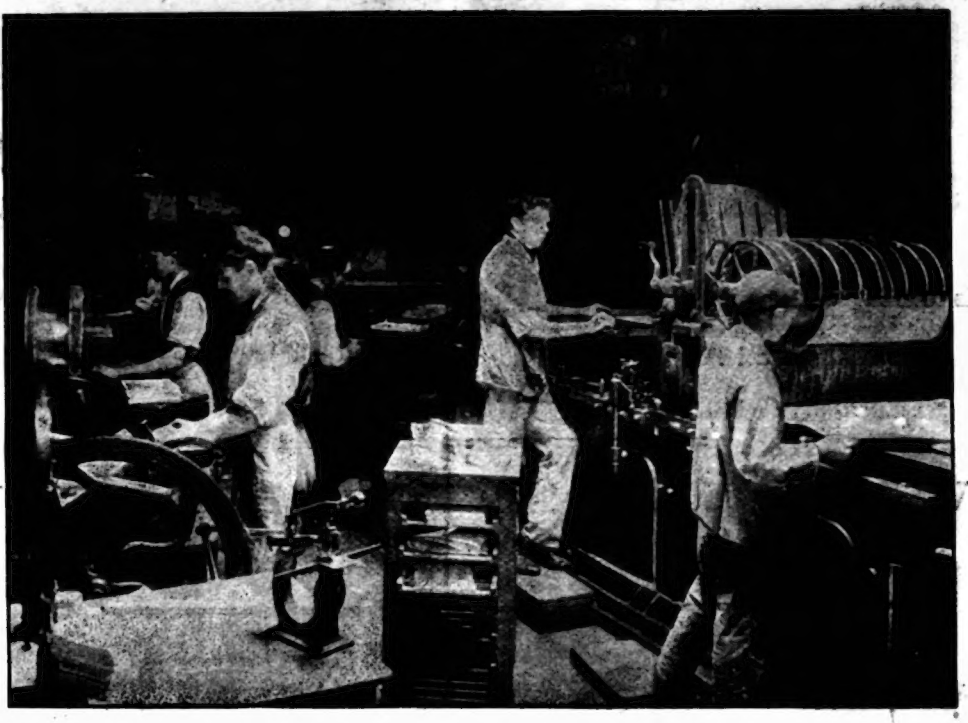

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